

What is claimed is:

1. A method for remotely servicing a computational component, comprising:
providing a firewall and a computational component requiring servicing, the firewall
analyzing communications to the computational component;
establishing a session with a servicing computational component, packets of the
5 session being analyzed by the firewall and the packets of the session being of a type
permitted by the firewall;
receiving a packet associated with the session, the packet comprising a machine
executable servicing command for the computational component requiring servicing; and
forwarding the servicing command to the computational component requiring
10 servicing.
2. The method of Claim 1, wherein the session is a real-time or near real-time
session.
3. The method of Claim 1, wherein the forwarding step occurs at least
substantially immediately after the receiving step.
4. The method of Claim 1, wherein the session is configured as an instant
messaging session.
5. The method of Claim 1, wherein the session is configured as a voice-over-IP
session.

6. The method of Claim 1, wherein the packet header is configured as a voice-over-IP packet but the payload comprises text setting forth the machine executable servicing command.

7. The method of Claim 1, wherein the packet header is configured as an instant message packet but the payload comprises the machine executable servicing command.

8. The method of Claim 7, wherein the machine executable servicing command is not associated with operation of a graphical user interface or the display of information.

9. The method of Claim 1, wherein the servicing command is associated with at least one of the following call processing parameters: Digital Communication System or DCS call coverage, audible message waiting, vectoring, attendant vectoring, Asynchronous Transfer Mode or ATM WAN spare processor, ATM, dial by name, echo cancellation, multimedia call handling, multiple call handling, caller identification, multifrequency signaling, Integrated Services Digital Network or ISDN network call redirection, centralized attendant, remote office, enhanced Direct Inward Dialing or DID routing, survivable remote processor, time of day routing, tenant partitioning, hospitality announcements, Vector Directory Number or VDN of origin announcement, wideband switching, wireless, logged-in automated call distribution or ACD agents, maximum currently registered IP stations, maximum administered IP trunks, offer category, maximum number of ports, maximum number of administered remote office trunks, maximum number of mobile stations,

abbreviated dialing enhanced list, audible message waiting, vectoring, answer supervision by call classifier, ATM trunking, agent states, dial by name, DCS call coverage, echo cancellation, multifrequency signaling, wideband switching, logged-in agents, offer category, maximum numbers of concurrently registered IP stations, administered IP trunks, ports, and concurrently administered remote office stations/trunks, call center release, features that have a product value (*e.g.*, corresponding to a product name or type), a release number (*e.g.*, referring to a product release identifier), and numeric value(s) (*e.g.*, indicating an operational parameter associated with the product and/or release, such as how many ports are licensed, how many licenses for the product are granted, how many concurrent users are allowed, and/or how many stations can be concurrently administered with the feature).

10. The method of Claim 1, wherein the servicing command is associated with at least one of the following user features: (a) features that are invoked prior to placing a call, (b) features that are invoked during a call, (c) features that are non-call associated that do not require display interactions, (d) features that are non-call associated that require display interactions, (e) features that are operated against calls not associated with the activating station, and (f) features that are operated against an alerting call.

11. The method of Claim 10, wherein the servicing command is associated with at least one of the following user features: analog bridged appearance select, abbreviated dialing, active appearance select, automatic appearance select, automatic call back, automatic intercom, autodial, bridged appearance selection, call appearance selection, call forwarding

5 all, call forwarding busy/no answer, call forwarding deactivation, call park, call unpark, call
pick-up, conference no answer, conference, calling party number block, calling party number
unblock, dial intercom, directed call pick-up, drop last added party, drop call, exclusion
(which prevents a user from being active on the same call on a physical port and a trunk
port), extend call off-switch enable (to enable the mapping agent), extend call off-switch
10 disable (to disable the mapping agent), group page, handover, held appearance select, hunt
night service, last number dialed, malicious call trace activation, malicious call trace
deactivation, manual message waiting, priority call, send all calls, manual signaling, transfer
on hang up, transfer to voice mail, and trunk night service.

12. The method of Claim 1, wherein the session is point-to-point.

13. The method of Claim 1, wherein the type of the session is not intended to be
associated with a servicing command.

14. The method of Claim 1, further comprising:

receiving a servicing response to the servicing command from the computational
component requiring servicing;

configuring the servicing response as at least one packet associated with the session;

5 and

sending the at least one servicing response packet to the servicing computational
component.

15. The method of Claim 13, wherein the type of session is intended for person-to-person communications.

16. A computer readable medium operable to perform the steps of Claim 1.'

17. A logic circuit operable to perform the steps of Claim 1.

18. A system for remotely servicing a computational component, comprising:
a firewall;

a computational component requiring servicing, the firewall analyzing
communications to the computational component;

5 a data collection agent operable to (a) establish a session with a servicing
computational component, packets of the session being analyzed by the firewall and the
session being of a type permitted by the firewall, (b) receive a packet associated with the
session, the packet comprising a machine executable servicing command for the
computational component requiring servicing, and (c) forward the servicing command to the
10 computational component requiring servicing.

19. The system of Claim 18, wherein the exchange of messages between the agent
and the servicing computational component is a real-time or near real-time.

20. The system of Claim 18, wherein the forwarding function occurs at least
substantially immediately after the receiving step.

21. The system of Claim 18, wherein the session is configured as an instant
messaging session.

22. The system of Claim 18, wherein the session is configured as a voice-over-IP
session.

23. The system of Claim 18, wherein the packet header is configured as a voice-over-IP packet but the payload comprises text setting forth the machine executable servicing command.

24. The system of Claim 18, wherein the packet header is configured as an instant message packet but the payload comprises the machine executable servicing command.

25. The system of Claim 24, wherein the machine executable servicing command is not associated with operation of a graphical user interface or the display of information.

26. The system of Claim 18, wherein the servicing command is associated with at least one of the following call processing parameters: Digital Communication System or DCS call coverage, audible message waiting, vectoring, attendant vectoring, Asynchronous Transfer Mode or ATM WAN spare processor, ATM, dial by name, echo cancellation, multimedia call handling, multiple call handling, caller identification, multifrequency signaling, Integrated Services Digital Network or ISDN network call redirection, centralized attendant, remote office, enhanced Direct Inward Dialing or DID routing, survivable remote processor, time of day routing, tenant partitioning, hospitality announcements, Vector Directory Number or VDN of origin announcement, wideband switching, wireless, logged-in automated call distribution or ACD agents, maximum currently registered IP stations, maximum administered IP trunks, offer category, maximum number of ports, maximum number of administered remote office trunks, maximum number of mobile stations, abbreviated dialing enhanced list, audible message waiting, vectoring, answer supervision

by call classifier, ATM trunking, agent states, dial by name, DCS call coverage, echo
15 cancellation, multifrequency signaling, wideband switching, logged-in agents, offer category,
maximum numbers of concurrently registered IP stations, administered IP trunks, ports, and
concurrently administered remote office stations/trunks, call center release, features that have
a product value (*e.g.*, corresponding to a product name or type), a release number (*e.g.*,
referring to a product release identifier), and numeric value(s) (*e.g.*, indicating an operational
20 parameter associated with the product and/or release, such as how many ports are licensed,
how many licenses for the product are granted, how many concurrent users are allowed,
and/or how many stations can be concurrently administered with the feature).

27. The system of Claim 18, wherein the servicing command is associated with
at least one of the following user features: (a) features that are invoked prior to placing a
call, (b) features that are invoked during a call, (c) features that are non-call associated that
do not require display interactions, (d) features that are non-call associated that require
5 display interactions, (e) features that are operated against calls not associated with the
activating station, and (f) features that are operated against an alerting call.

28. The system of Claim 27, wherein the servicing command is associated with
at least one of the following user features: analog bridged appearance select, abbreviated
dialing, active appearance select, automatic appearance select, automatic call back, automatic
intercom, autodial, bridged appearance selection, call appearance selection, call forwarding
5 all, call forwarding busy/no answer, call forwarding deactivation, call park, call unpark, call
pick-up, conference no answer, conference, calling party number block, calling party number

unblock, dial intercom, directed call pick-up, drop last added party, drop call, exclusion (which prevents a user from being active on the same call on a physical port and a trunk port), extend call off-switch enable (to enable the mapping agent), extend call off-switch
10 disable (to disable the mapping agent), group page, handover, held appearance select, hunt night service, last number dialed, malicious call trace activation, malicious call trace deactivation, manual message waiting, priority call, send all calls, manual signaling, transfer on hang up, transfer to voice mail, and trunk night service.

29. The system of Claim 18, wherein the session is point-to-point.

30. The system of Claim 18, wherein the type of the session is not intended to be associated with a servicing command.

31. The system of Claim 18, wherein the data collection agent is further operable to:

(d) receive a servicing response to the servicing command from the computational component requiring servicing;

5 (e) configure the servicing response as at least one packet associated with the session; and

(f) send the at least one servicing response packet to an administrative device.

32. The system of Claim 30, wherein the type of session is intended for person-to-person communications.

33. A method for remotely servicing a computational component, comprising:
providing a firewall and a computational component requiring servicing, the firewall
analyzing communications to the computational component;

5 establishing a session with a servicing computational component, packets of the
session being analyzed by the firewall and the session being of a type permitted by the
firewall;

10 sending a servicing command received in one or more packets associated with the
session to the computational component requiring servicing, each of the one or more packets
comprising at least part of a machine executable servicing command for the computational
component requiring servicing;

receiving, from the computational component requiring servicing, a servicing
response to a servicing command;

configuring the servicing response as a packet associated with the session; and

forwarding the servicing response packet to the servicing computational component.

34. The method of Claim 33, wherein the session is a real-time or near real-time
session.

35. The method of Claim 33, wherein the forwarding step occurs at least
substantially immediately after the receiving step.

36. The method of Claim 33, wherein the session is configured as an instant
messaging session.

37. The method of Claim 33, wherein the session is configured as a voice-over-IP session.

38. The method of Claim 33, wherein the packet header is configured as a computer telephony packet but the payload comprises text setting forth the machine executable servicing command.

39. The method of Claim 33, wherein the packet header is configured as an instant message packet but the payload comprises text setting forth the machine executable servicing command.

40. The method of Claim 39, wherein the machine executable servicing command is not associated with operation of a graphical user interface or the display of information.

41. The method of Claim 33, wherein the servicing command is associated with at least one of the following call processing parameters: Digital Communication System or DCS call coverage, audible message waiting, vectoring, attendant vectoring, Asynchronous Transfer Mode or ATM WAN spare processor, ATM, dial by name, echo cancellation, multimedia call handling, multiple call handling, caller identification, multifrequency signaling, Integrated Services Digital Network or ISDN network call redirection, centralized attendant, remote office, enhanced Direct Inward Dialing or DID routing, survivable remote processor, time of day routing, tenant partitioning, hospitality announcements, Vector Directory Number or VDN of origin announcement, wideband switching, wireless, logged-in

10 automated call distribution or ACD agents, maximum currently registered IP stations,
maximum administered IP trunks, offer category, maximum number of ports, maximum
number of administered remote office trunks, maximum number of mobile stations,
abbreviated dialing enhanced list, audible message waiting, vectoring, answer supervision
by call classifier, ATM trunking, agent states, dial by name, DCS call coverage, echo
15 cancellation, multifrequency signaling, wideband switching, logged-in agents, offer category,
maximum numbers of concurrently registered IP stations, administered IP trunks, ports, and
concurrently administered remote office stations/trunks, call center release, features that have
a product value (*e.g.*, corresponding to a product name or type), a release number (*e.g.*,
referring to a product release identifier), and numeric value(s) (*e.g.*, indicating an operational
20 parameter associated with the product and/or release, such as how many ports are licensed,
how many licenses for the product are granted, how many concurrent users are allowed,
and/or how many stations can be concurrently administered with the feature).

42. The method of Claim 33, wherein the servicing command is associated with
at least one of the following user features: (a) features that are invoked prior to placing a
call, (b) features that are invoked during a call, (c) features that are non-call associated that
do not require display interactions, (d) features that are non-call associated that require
5 display interactions, (e) features that are operated against calls not associated with the
activating station, and (f) features that are operated against an alerting call.

43. The method of Claim 42, wherein the servicing command is associated with
at least one of the following user features: analog bridged appearance select, abbreviated

dialing, active appearance select, automatic appearance select, automatic call back, automatic intercom, autodial, bridged appearance selection, call appearance selection, call forwarding
5 all, call forwarding busy/no answer, call forwarding deactivation, call park, call unpark, call pick-up, conference no answer, conference, calling party number block, calling party number unblock, dial intercom, directed call pick-up, drop last added party, drop call, exclusion (which prevents a user from being active on the same call on a physical port and a trunk port), extend call off-switch enable (to enable the mapping agent), extend call off-switch
10 disable (to disable the mapping agent), group page, handover, held appearance select, hunt night service, last number dialed, malicious call trace activation, malicious call trace deactivation, manual message waiting, priority call, send all calls, manual signaling, transfer on hang up, transfer to voice mail, and trunk night service.

44. The method of Claim 33, wherein the session is defined by a point-to-point protocol.

45. The method of Claim 33, wherein the type of the session is not intended to be associated with a servicing command.

46. The method of Claim 33, further comprising:
receiving the one or more packets associated with the session; and
forwarding the servicing command to the computational component requiring servicing.

47. The method of Claim 45, wherein the type of session is intended for person-to-person communications.

48. A computer readable medium comprising instructions to perform the steps of Claim 33.

49. A logic circuit operable to perform the steps of Claim 33.